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Eastern University, Sri Lanka

**EASTERN UNIVERSITY, SRI LANKA**  
**EXTERNAL DEGREE IN SCIENCE**  
**FIRST EXAMINATION IN SCIENCE 2002/03**  
**FIRST SEMESTER (June/July, 2004)**  
**EXCC 101 Fundamentals of Computer Systems**

Repeat  
**Answer all Questions**

**Time allowed: 01 hour**

Answer Four Questions Only

Time allowed: 02 hours

**Q1**

- (a) Describe the two major components of a computer system.
- (b) Computer hardware is made up of five parts. List and describe them.
- (c) Describe the two major categories of software.
- (d) What is the purpose of an operating system?
- (e) Identify at least two types of system software that you will use when you write programs.
- (f) List the levels of computer languages.
- (g) What are the primary differences between symbolic and high-level languages?
- (h) Name and explain the usage of different translators in computer environment.

**Q2**

- (a) State the full name of the following abbreviations and briefly explain each:
  - (i). ENIAC
  - (ii). HTTP
  - (iii). WWW
- (b) What is cache memory and what is the purpose of it? Illustrate with a diagram.
- (c) Discuss LAN topologies.
- (d) What are the features of the Internet?
- (e) Convert the following binary numbers into its equivalent hexadecimal numbers:
  - (a) 101010101011
  - (b) 110001010101
- (f) Convert the following numbers into its equivalent binary numbers:
  - (i).  $143_8$
  - (ii).  $159_{10}$
  - (iii).  $5BF_{16}$